REMARKS

The Office Action dated February 13, 2004, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 8, 16, 21, 26, 32, 36 and 44 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. No new matter has been added. Claims 1-64 are presently pending in the application and are respectfully submitted for consideration.

As a preliminary matter, the Office Action indicated that claims 56-64 are allowed. Applicants acknowledge with appreciation the finding of allowable subject matter.

Applicants also note that the drawings filed on December 7, 2000, were accepted by the Examiner.

Claims 1-55 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,473,599 (*Li et al.*) in view of U.S. Patent No. 6,577,634 (*Tsukakoshi et al.*) The Office Action took the position that *Li* disclosed all the elements of the rejected claims, with the exception of "replicating the received or generated routing protocol state change to the standby controller system." The Office Action then cited *Tsukakoshi* as teaching the features missing from *Li*, and took the position that it would have been obvious to one skilled in the art at the time the invention was made to "include the protocol state change replication of *Tsukakoshi* in the network

redundancy system of *Li*." Applicants submit that the presently pending claims are neither disclosed nor suggested by the cited references, either alone or in combination.

Claim 1, upon which claims 2-7 depend, recites a method in a network device having a redundancy platform including an active controller system and a standby controller system. The method includes receiving or generating a routing protocol state change by the active controller system. The method also includes replicating, in the network device, the received or generated routing protocol state change to the standby controller system. Claims 16 and 21, upon which claims 17-20 depend, are other method claims that recite similar subject matter.

Claim 8, upon which claims 9-15 depend, recites a network device. The network device includes a standby controller system. The network device also includes an active controller system to receive or generate a routing protocol state change and to replicate, in the network device, the received or generated routing protocol state change to the standby controller system. Claim 26, upon which claims 27-31 depend, recite similar subject matter.

Claim 32, upon which claims 33-35 depend, recites a machine-readable medium that provides instructions which, if executed by a processor, cause the processor to perform the operations. The operations include receiving or generating a routing protocol state change in an active system in a network device. The operations also include replicating the received or generated routing protocol state change in a standby system in the network device.

Claim 36, upon which claims 37-43 depend, recites a network. The network includes at least one peer node. The network also includes a redundant node to communicate with the peer nodes. The redundant node has a redundancy platform including an active controller system and a standby controller system. The active controller system is to receive or generate a routing protocol state change and to replicate, in the redundant node, the received or generated routing protocol state change to the standby controller system. Claim 44, upon which claims 45-49 depend, is a network claim that recites similar subject matter.

Claim 44, upon which claims 45-49 depend, recites a network which includes at least one peer node. The network also includes a redundant node to communicate with the at least one peer node, the redundant node having a redundancy platform including an active controller system and a standby controller system, the active controller system is to receive or generate a Border Gateway Protocol state change or a Transmission Control Protocol state change and to replicate, in the redundant node, the received or generated BGP state change or TCP state change to the standby controller system.

Claim 50, upon which claims 51-52 depend, recites a method in a network device having an active system and a standby system. The method includes maintaining in realtime routing protocol state changes received or generated by the active system in the standby system. The method also includes detecting a failure in the active system. The method also includes resuming operation by the standby controller system using the maintained routing protocol state changes.

Claim 53, upon which claims 54-55 depend, recites a network device. The network device includes a standby card. The network device also includes an active card to store persistent data, session states, and routing information and to replicate in realtime the persistent data, session states, and routing information to the standby card.

As discussed in the specification, the present invention reduces service outages or degradation for a network device. The present invention also increases service availability on a network due to the reduction of software and hardware failures of the network device. Further, routing protocol states may be maintained in real time to handle the dynamic changes created by routing protocols. It is respectfully submitted that the cited references, when viewed or when combined, fail to disclose or suggest the elements of any of the presently pending claims. Therefore, the cited references fail to provide the critical and unobvious advantages discussed above.

Li relates to a standby router protocol. *Li* describes a standby router from a group of routers that backs up an active router so that if the active router becomes inoperative, the standby router automatically begins emulating a virtual router. A host router of *Li* does not know which router from the group of routers is actually handling the data packets that it sends. Further, *Li* describes the routers negotiating with one another for the statuses of active and standby routers by sending three types of relevant messages: hello messages, coup messages, and resign messages. Depending upon the current router's state and the information contained in each of these messages, a given router of *Li* may or may not change its state. If the standby router becomes inoperative or takes

over for the active router, *Li* describes that the other routers in the group of routers hold an election to determine which one of the group of routers should take over for the standby router. *Li*, however, does not disclose or suggest replicating, in the network device, a received or generated routing protocol state change to the standby controller system.

Tsukakoshi relates to a method for sharing network information in a router apparatus. *Tsukakoshi* describes a virtual router known as a clustered router that is a plurality of routers sharing network information that makes the plurality of routers externally appear as if they were a single virtual router. A routing protocol running in each router in the clustered router exchanges network information with other routers outside the clustered router and, when its own network information changes, notifies the network information sharing means of *Tsukakoshi* about the change. The network information sharing means generates a network information notification packet containing a routing protocol identifier and sends the packet to all routers in the clustered router. Upon receiving the network information notification packet, the network information sharing means of *Tsukakoshi* extracts updated information from the received packet and sends the extracted updated information to the corresponding routing protocol means in accordance with the routing protocol identifier. *Tsukakoshi*, however, does not disclose or suggest replicating, in the network device, a received or generated routing protocol state change through a standby controller system.

In contrast, claim 1 recites "a network device having a redundancy platform including an active controller system and a standby controller system." Claim 1 also recites "replicating, in the network device, the received or generated routing protocol state change to the standby controller system." These features are also recited in the other pending independent claims. Applicants submit that at least these features of the independent claims are not disclosed or suggested by the cited references.

The Office Action alleged that *Tsukakoshi* discloses the full replication of all state changes to every router, which acts as a control system, in the clustered router. Applicants submit that the pending claims are distinguishable from the cited references because the active controller system and the standby controller system are in a network device. Thus, the replicating of the received generated routing protocol state change to the standby controller system is performed in the network device and not, for example, in a clustered router sending state changes to every router. Referring to Figure 12 of *Tsukakoshi*, routers 12 include router 1 and router 2. This aspect of *Tsukakoshi* does not disclose or suggest an active controller and a standby controller in a network device.

Referring to *Li*, *Li* describes hello, coup, and resign messages negotiating with one another for the statuses of the active and standby routers. Applicants submit that this aspect of *Li* does not disclose or suggest receiving or generating a routing protocol state change by the active controller system. Applicants further submit that *Li* and *Tsukakoshi* do not disclose or suggest generating routing protocol state changes by an active controller system. Therefore, *Li* and *Tsukakoshi* do not disclose or suggest all the

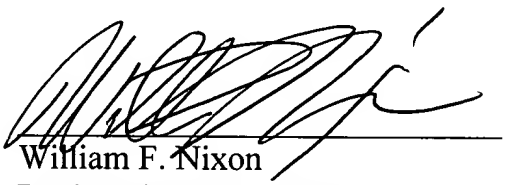
features of the presently pending claims. Applicants respectfully request that the obviousness rejection be withdrawn.

It is submitted that each of claims 1-55, like allowed claims 56-64, recite subject matter that is neither disclosed nor suggested in the cited references. It is therefore respectfully requested that all of claims 1-64 be placed in condition for allowance, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



William F. Nixon
Registration No. 44,262

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

WFN:cct

Enclosures: Petition for Extension of Time